

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS and NESHAP SOURCE --
RENEWAL

PERMITTEE

Alexian Brothers Medical Center
Attn: Ken Waltz
800 Biesterfield Road
Elk Grove Village, Illinois 60007

Application No.: 90010031	I. D. No.: 031440AEZ
Applicant's Designation:	Date Received: July 27, 2010
Subject: General Medical and Surgical Hospital	
Date Issued: November 21, 2014	Expiration Date: November 21, 2024
Location: 800 Biesterfield Road, Elk Grove Village, Cook County, 60007	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Three (3) 28.6 mmBtu/hr Natural Gas/Distillate Fuel Oil-Fired Boilers
(Boilers 1, 2, & 3);
Two (2) 2,188 kW (2,934 HP) Diesel-Powered Emergency Generator Sets
(Generators #1 and #3); and
Three (3) Ethylene Oxide Sterilizers

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Sulfur Dioxide (SO₂)). As a result the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.
- 2a. Boilers 1, 2, & 3 are subject to the New Source Performance Standard (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.40c(a), Except as provided in 40 CFR 60.40c(d), (e), (f), and (g), the affected facility to which 40 CFR 60 Subpart Dc applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29

megawatts (MW) (100 million British thermal units per hour (mmBtu/hr)) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr).

- b. Pursuant to 40 CFR 60.42c(d), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/mmBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that combusts greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.
 - c. Pursuant to 40 CFR 60.42c(h)(1), for distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 mmBtu/hour), compliance with the emission limits or fuel oil sulfur limits under 40 CFR 60.42c may be determined based on a certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.
 - d. Pursuant to 40 CFR 60.42c(i), the SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under 40 CFR 60.42c apply at all times, including periods of startup, shutdown, and malfunction.
- 3a. Generators #1 and #3 are subject to the New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subparts A and IIII. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.4200(a), the provisions of 40 CFR 60 Subpart IIII are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in 40 CFR 60.4200(a)(1) through (4). For the purposes of 40 CFR 60 Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator.
- i. Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines.
 - ii. Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.
 - iii. The provisions of 40 CFR 60.4208 are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.
- b. Pursuant to 40 CFR 60.4205(a), owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the

emission standards in Table 1 to 40 CFR 60 Subpart IIII. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

Table 1 to Subpart IIII of Part 60 – Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in 40 CFR 60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

- 4a. Generators #1 and #3 are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 63.6590(a), an affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.
- b. Pursuant to 40 CFR 63.6590(c)(1), a new or reconstructed stationary residential, commercial, or institutional emergency stationary RICE located at an area source must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR Part 63.
5. The three (3) ethylene oxide sterilizers is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hospital Ethylene Oxide Sterilizers, 40 CFR 63 Subparts A and WWWW. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 63.10382(a), you are subject to 40 CFR 63 Subpart WWWW if you own or operate an ethylene oxide sterilization facility at a hospital that is an area source of hazardous air pollutant (HAP) emissions.
- 6a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent, but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.206, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).
- 7a. Pursuant to 35 Ill. Adm. Code 214.122(b)(2), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-Hour of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).
- b. Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm.
- c. Pursuant to 35 Ill. Adm. Code 214.304, the emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with applicable 35 Ill. Adm. Code Part 214 Subparts B through F (i.e., 35 Ill. Adm. Code 214.122(b)(2)).
- 8. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.
- 9. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code Part 218 Subpart G (Use of Organic Material) shall apply only to photochemically reactive material.
- 10a. This permit is issued based on the three ethylene oxide sterilizers not being subject to the requirements of the NESHAP for Ethylene Oxide Emissions Standards for Sterilization Facilities, 40 CFR 63 Subpart O. Pursuant to 40 CFR 63.360(e), 40 CFR 63 Subpart O does not apply to

ethylene oxide sterilization operations at stationary sources such as hospitals, doctors offices, clinics, or other facilities whose primary purpose is to provide medical services to humans or animals.

- b. This permit is issued based on Boilers 1, 2, & 3 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD because this source is not, or is part of, a major source of HAP as defined in 40 CFR 63.2.
 - c. This permit is issued based on Boilers 1, 2, & 3 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11195(e), a gas-fired boiler as defined in 40 CFR 63 Subpart JJJJJJ are not subject to 40 CFR 63 Subpart JJJJJJ and to any requirements in 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11237, gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.
11. Pursuant to 35 Ill. Adm. Code 218.303, the provisions of 35 Ill. Adm. Code 218.301 and 218.302 (Use of Organic Material) shall not apply to fuel combustion emission units.
- 12a. Pursuant to 40 CFR 60.11(b), compliance with opacity standards in 40 CFR Part 60 shall be determined by conducting observations in accordance with Method 9 in Appendix A of 40 CFR Part 60, any alternative method that is approved by the Illinois EPA or USEPA, or as provided in 40 CFR 60.11(e)(5). For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
- b. Pursuant to 40 CFR 60.11(c), the opacity standards set forth in 40 CFR Part 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
 - c. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

- 13a. Pursuant to 40 CFR 60.4206, owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.
- b. Pursuant to 40 CFR 60.4207(a), beginning October 1, 2007, owners and operators of stationary CI ICE subject to 40 CFR 60 Subpart IIII that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).
- c. Pursuant to 40 CFR 60.4207(b), beginning October 1, 2010, owners and operators of stationary CI ICE subject to 40 CFR 60 Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.
- d. Pursuant to 40 CFR 60.4211(a), if you are an owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.
- e. Pursuant to 40 CFR 60.4211(b), if you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to model years in table 3 to 40 CFR 60 Subpart IIII and must comply with the emission standards specified in 40 CFR 60.4205(c), you must demonstrate compliance according to one of the methods specified in 40 CFR 60.4211(b)(1) through (5).
 - i. Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications;
 - ii. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly;
 - iii. Keeping records of engine manufacturer data indicating compliance with the standards;
 - iv. Keeping records of control device vendor data indicating compliance with the standards; and

- v. Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable.
- f. Pursuant to 40 CFR 60.4211(f), if you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines.
 - i. There is no time limit on the use of emergency stationary ICE in emergency situations.
 - ii. You may operate your emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2).
 - A. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Illinois EPA or USEPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - B. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies, or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

- C. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - A. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - I. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
 - II. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - III. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - IV. The power is provided only to the facility itself or to support the local transmission and distribution system.
 - V. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
- 14a. Pursuant to 40 CFR 63.10390, you must sterilize full loads of items having a common aeration time, except under medically necessary circumstances, as that term is defined in 40 CFR 63.10448.

- b. Pursuant to 40 CFR 63.10420, for each sterilization unit not equipped with an air pollution control device, you must demonstrate continuous compliance with the management practice standard in 40 CFR 63.10390 by recording the date and time of each sterilization cycle, whether each sterilization cycle contains a full load of items, and if not, a statement from a hospital central services staff, a hospital administrator, or a physician that it was medically necessary.
 - c. Pursuant to 40 CFR 63.10440, Table 1 to 40 CFR 63 Subpart WWWW (see also Attachment B) shows which parts of the General Provisions in 40 CFR 63.1 through 63.16 apply to you.
- 15a. Pursuant to 40 CFR 80.510(b), beginning June 1, 2010. Except as otherwise specifically provided in 40 CFR 80 Subpart I, all NR and LM diesel fuel is subject to the following per-gallon standards:
- i. Sulfur content 15 ppm maximum for NR diesel fuel.
 - ii. Cetane index or aromatic content, as follows:
 - A. A minimum cetane index of 40; or
 - B. A maximum aromatic content of 35 volume percent.
- 16a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. Boilers 1, 2, & 3 shall only be operated with natural gas or distillate fuel oil as the fuel. The use of any other fuel in Boilers 1, 2, or 3 requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
 - c. Generators #1 and #3 shall only be operated with distillate fuel oil as the fuel. The use of any other fuel in Generator #1 or #3 requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
 - d. The Permittee shall not keep, store or use distillate fuel oil (Grades No. 1 and 2) at this source with a sulfur content greater than the larger of the following two values:
 - i. 0.28 weight percent, or
 - ii. The weight percent given by the formula: Maximum weight percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.

- e. Organic liquid by-products or waste materials shall not be used in any emission unit at this source without written approval from the Illinois EPA.
 - f. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 17a. Emissions and operation of the three (3) 28.6 mmBtu/hr boilers combined shall not exceed the following limits:
- i. Natural Gas Usage: 75.2 mmscf/Mo, 751.5 mmscf/Yr
 - ii. Emissions for the combustion of natural gas in the boilers:

<u>Pollutant</u>	<u>Emission Factor (lb/mmscf)</u>	<u>Emissions (Ton/Mo)</u>	<u>(Ton/Yr)</u>
Carbon Monoxide (CO)	84.0	3.16	31.56
Nitrogen Oxides (NO _x)	100.0	3.76	37.58
Particulate Matter (PM)	7.6	0.29	2.86
Sulfur Dioxide (SO ₂)	0.6	0.02	0.23
Volatile Organic Material (VOM)	5.5	0.21	2.07

These limits are based on the maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- iii. Distillate Fuel Oil usage: 306.2 kgal/yr
- iv. Emissions from the combustion of distillate fuel oil in the boilers:

<u>Pollutant</u>	<u>Emission Factor (lb/10³ Gal)</u>	<u>Emissions (lbs/Hr)</u>	<u>(Ton/Yr)</u>
Carbon Monoxide (CO)	5.00	3.06	0.77
Nitrogen Oxides (NO _x)	20.00	12.26	3.06
Particulate Matter (PM)	2.00	1.22	0.31
Sulfur Dioxide (SO ₂)	39.76	24.37	6.09
Volatile Organic Material (VOM)	0.20	0.12	0.03

These limits are based on the maximum fuel oil usage at 500 hours/year of operation, the maximum firing rates of the boilers (28.6 mmBtu/hr, each), and standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E, September 1999, corrected May 2010).

- b. Emissions and operation of Generators #1 and #3 shall not exceed the following:
 - i. Hours of operation: 500 hours/year (each generator).

- ii. Emissions from Generators #1 and #3 shall not exceed:

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
	<u>(lb/HP-hr)</u>	<u>lbs/Hour</u>	<u>Tons/Year</u>
Carbon Monoxide (CO)	0.01874	109.98	27.50
Nitrogen Oxides (NO _x)	0.01513	88.76	22.19
Particulate Matter (PM)	0.00089	5.21	1.30
Sulfur Dioxide (SO ₂)	0.000012	0.07	0.02
Volatile Organic Material (VOM)	0.00214	12.54	3.14

The above limits are based on a maximum 500 hours/year of operation of the generators, and emission factors derived from Table 1 to 40 CFR Part 60 Subpart IIII for units with power rating of greater than 560 kW (750 HP) with the exception of sulfur dioxide which was calculated from Table 3.4-1, AP-42 (Fifth Edition, Volume I, Supplement B, October 1996) and a sulfur content of 0.0015% by weight.

- c. This permit is issued based on negligible emissions of VOM from the three (3) ethylene oxide sterilizers. For this purpose, VOM emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- d. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
18. This permit is issued based on the Potential to Emit (PTE) for Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from this source being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
- 19a. Pursuant to 40 CFR 60.8(a), at such other times as may be required by the Illinois EPA or USEPA under section 114 of the Clean Air Act, the owner or operator of such facility shall conduct performance test(s) for boilers 2 and 3 and furnish the Illinois EPA or USEPA a written report of the results of such performance test(s).
- b. Pursuant to 40 CFR 60.8(b), performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart of 40 CFR Part 60 unless the Illinois EPA or USEPA:
- i. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
- ii. Approves the use of an equivalent method;

- iii. Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
 - iv. Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected facility is in compliance with the standard; or
 - v. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under section 114 of the Clean Air Act.
- c. Pursuant to 40 CFR 60.8(c), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- d. Pursuant to 40 CFR 60.8(d), the owner or operator of an affected facility shall provide the Illinois EPA or USEPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Illinois EPA or USEPA the opportunity to have an observer present. If after 30 days' notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Illinois EPA or USEPA as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Illinois EPA or USEPA by mutual agreement.
- e. Pursuant to 40 CFR 60.8(e), the owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
- i. Sampling ports adequate for test methods applicable to such facility. This includes:
 - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

- B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
- ii. Safe sampling platform(s).
- iii. Safe access to sampling platform(s).
- iv. Utilities for sampling and testing equipment.
- f. Pursuant to 40 CFR 60.8(f), unless otherwise specified in the applicable subpart of 40 CFR Part 60, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard under 40 CFR Part 60. For the purpose of determining compliance with an applicable standard under 40 CFR Part 60, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Illinois EPA's or USEPA's approval, be determined using the arithmetic mean of the results of the two other runs.
- 20a. Pursuant to 40 CFR 60.44c(g), for oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under 40 CFR 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under 40 CFR 60.46c(d)(2).
- b. Pursuant to 40 CFR 60.44c(h), for affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.
- 21. This permit is issued based on Generators #1 and #3 at this source each having a displacement of less than 30 liters per cylinder and have been certified by the manufacturer to meet the standards of 40 CFR 60.4202(a) through (d). As a result, this permit is issued based on these diesel-powered emergency generator sets not being subject to the testing requirements of 40 CFR 60.8.
- 22a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities

of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
 - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
 - b. Testing required by Condition 23 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
23. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 24a. Pursuant to 40 CFR 60.46c(d)(2), as an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur

content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

- b. Pursuant to 40 CFR 60.46c(e), the monitoring requirements of 40 CFR 60.46c(a) and (d) shall not apply to affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under 40 CFR 60.48c(f), as applicable.
25. Pursuant to 40 CFR 60.4209(a), if you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.
- 26a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- 27a. Pursuant to 40 CFR 60.48c(e)(11), the owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall keep records including the following information, as applicable. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under 40 CFR 60.48c(f)(1), (2), (3), or (4), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.
- b. Pursuant to 40 CFR 60.48c(f)(1), fuel supplier certification shall include the following information for distillate oil:
 - i. The name of the oil supplier;

- ii. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and
 - iii. The sulfur content of the oil.
 - c.
 - i. Pursuant to 40 CFR 60.48c(g)(1), except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
 - ii. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
 - iii. Pursuant to 40 CFR 60.48c(g)(3), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to 40 CFR 60 Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
 - d. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48 shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
28. Pursuant to 40 CFR 60.4214(b), if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to 40 CFR 60 Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.
29. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit,

without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

- 30a. Pursuant to 40 CFR 63.10432, you must keep the records specified in 40 CFR 63.10432(a) and (b).
 - i. A copy of the Initial Notification of Compliance Status that you submitted to comply with 40 CFR 63 Subpart WWWW.
 - ii. Records required by 40 CFR 63.10420 for each sterilization unit not equipped with an air pollution control device.
 - b. Pursuant to 40 CFR 63.10434(a), your records must be in a form suitable and readily available for expeditious review.
 - c. Pursuant to 40 CFR 63.10434(b), you must keep each record for 5 years following the date of each record.
 - d. Pursuant to 40 CFR 63.10434(c), you must keep each record onsite for at least 2 years after the date of each record. You may keep the records offsite for the remaining 3 years.
31. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.

- 32a. The Permittee shall maintain records of the following items to demonstrate compliance with the Conditions of this permit:
- i. Natural gas usage for the boilers (mmscf/month and mmscf/year);
 - ii. Fuel oil usage for the boilers and diesel-powered emergency generator sets (gallons/month and gallons/year);
 - iii. Certification from the fuel oil supplier of the weight percent sulfur content of the distillate fuel oil used in the boilers and the diesel-powered generator sets with each fuel oil shipment received (weight %);
 - iv. Diesel generator set runtime (hours/month, hours/year);
 - v. An inspection, maintenance and repair log of the diesel-powered generator sets listing each activity performed with date;
 - vi. Ethylene oxide usage for the sterilizers (lbs/month and lbs/year); and
 - vii. Monthly and annual emissions of CO, NO_x, PM, SO₂, VOM and HAPs from the source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
33. Pursuant to 40 CFR 60.7(a)(4), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows: A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.

- 34a. Pursuant to 40 CFR 60.48c(b), the owner or operator of each affected facility subject to the SO₂ emission limits of 40 CFR 60.42c, or the PM or opacity limits of 40 CFR 60.43c, shall submit to the Illinois EPA or USEPA the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of 40 CFR Part 60.
- b. Pursuant to 40 CFR 60.48c(d), the owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall submit reports to the Illinois EPA or USEPA.
- c. Pursuant to 40 CFR 60.48c(j), the reporting period for the reports required under 40 CFR 60 Subpart Dc is each six-month period. All reports shall be submitted to the Illinois EPA or USEPA and shall be postmarked by the 30th day following the end of the reporting period.
35. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 36a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within thirty (30) days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

Telephone: 847/294-4000 Fax: 847/294-4018

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It should be noted that the two (2) 2.0 mmBtu/hr hot water boilers and three three (3) diesel storage tanks are exempt from permitting, pursuant to 35 Ill. Adm. Code 201.146(d) and (n)(3), respectively.

If you have any questions concerning this permit, please call Jocelyn Stakely at 217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REB:JRS:jws

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the General Medical and Surgical Hospital operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons/year for SO₂) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

E M I S S I O N S (Tons/yr)

<u>Emission Unit</u>	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>
Boilers 1, 2, & 3					
(Natural Gas)	31.56	37.58	2.86	0.23	2.07
(#2 Fuel Oil)	0.77	3.06	0.31	6.09	0.03
Generators #1 and #3	27.50	22.19	1.30	0.02	3.14
3 Ethylene Oxide Sterilizers	--	--	--	--	<u>1.32</u>
Totals:	59.83	62.83	4.47	6.34	6.56

Attachment B - Table 1 to 40 CFR Subpart WWWW - Applicability of General Provisions to Subpart WWWW

As required in 40 CFR 63.10440, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) shown in the following table:

Citation	Subject	Applies to subpart WWWW	Explanation
\$63.1(a) (1)-(4), (6), (10)-(12), (b)(1), (3)	Applicability	Yes	
\$63.1(a) (5), (7)-(9)	[Reserved]		
\$63.1(b)(2)	[Reserved]		
\$63.1(c) (1)-(2)	Applicability of 40 CFR Part 63 after a relevant standard has been set	Yes	40 CCFR 63.10446 exempts affected sources from the obligation to obtain title V operating permits for purposes of being subject to 40 CFR 63 Subpart WWWW.
\$63.1(c) (3)-(4)	[Reserved]		
\$63.1(c)(5)	Subject to notification requirements	No	
\$63.1(d)	[Reserved]		
\$63.1(e)	Emission limitation by permit	Yes	
\$63.2	Definitions	Yes	
\$63.3	Units and abbreviations	Yes	
\$63.4	Prohibited activities	Yes	
\$63.5	Construction/reconstruction	No	
\$63.6(a), (b)(1)-(5), (7)	Compliance with standards and maintenance requirements	Yes	
\$63.6(b)(6)	[Reserved]		
\$63.6(c)(1)	Compliance dates for existing sources	Yes	Subpart WWWW requires compliance 1 year after the effective date.
\$63.6(c) (2), (5)	Compliance dates for CAA section 112(f) standards and for area sources that become major	No	
\$63.6(c) (3)-(4)	[Reserved]		
\$63.6(d)	[Reserved]		
\$63.6(e)-(h)	Alternative nonopacity emission standard	No	
\$63.6(i)-(j)	Compliance extension	Yes	
\$63.7	Performance testing requirements	No	
\$63.8	Monitoring requirements	No	
\$63.9(a)	Applicability and initial notifications addressees	Yes	

§63.9(b)	Initial notifications	No	
§63.9(c)	Request for extension of compliance	Yes	
§63.9(d)-(j)	Other notifications	No	
§63.10(a)(1)-(2)	Recordkeeping and reporting requirements, applicability	Yes	
§63.10(a)(3)-(4)	General information	Yes	
§63.10(a)(5)-(7)	Recordkeeping and reporting requirements, reporting schedules	No	
§63.10(b)(1)	Retention time	Yes	
§63.10(b)(2)-(f)	Recordkeeping and reporting requirements	No	
§63.11	Control device requirements	No	
§63.12	State authority and delegations	Yes	
§§63.13-63.16	Addresses, Incorporations by Reference, availability of information, performance track provisions	Yes	